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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/782,524	02/14/2001	Ku Hyun Park	049128-5004	7541

9629 7590 09/12/2003

MORGAN LEWIS & BOCKIUS LLP
1111 PENNSYLVANIA AVENUE NW
WASHINGTON, DC 20004

EXAMINER

CHUNG, DAVID Y

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 09/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/782,524

Applicant(s)

PARK, KU HYUN

Examiner

David Y. Chung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,6-9 and 16-18 is/are rejected.
- 7) ☒ Claim(s) 2-5 and 10-15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 6-9 and 16-18 rejected under 35 U.S.C. 103(a) as being unpatentable over Okumura et al. (U.S. 5,142,393) in further view of Wang et al. (U.S. 5,982,464), Hatano et al. (U.S. 6,320,629), and Mitsui et al. (U.S. 6,351,298).

As to claims 1, 8, 9 and 18, Okumura et al. discloses a liquid crystal device with a compensator having negative optical anisotropy. Note in figure 1, first and second substrates 21 and 22, liquid crystal layer 24, and optically anisotropic film 3. Okumura et al. discloses that the axis corresponding to N3e is in the direction approximately parallel to the surfaces of the substrates of the liquid crystal cell. Furthermore, a second optically anisotropic film can be added to the display as shown in figure 13.

Okumura et al. does not disclose a sub-twisted nematic liquid crystal. However, Wang et al. discloses that sub-twisted, twisted, and super-twisted nematic liquid crystal materials were all conventional functionally equivalent materials used in displays. Wang et al. teaches that any one of these types of liquid crystal material could be used in a

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display as long as it had a phase that exhibits birefringence. See column 5, lines 35-45. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use sub-twisted liquid crystal material because it's well known nature allowed for the manufacture of cost effective devices having predictable behavior.

Okumura et al. discloses an optically anisotropic film formed on the outer surface of the substrate instead of on the inner surface. However, both arrangements were well known functionally equivalent alternatives. Note quarter-wave plate 39 in figure 1 of Mitsui et al. Note phase difference regions 110 in figure 1 of Hatano et al. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to form the optically anisotropic film on the inner surface of the display because it was a well-known functionally equivalent alternative.

As to claims 6, 7, 16 and 17, Okumura et al. does not disclose intersecting gate and data lines with thin-film transistors at the intersections. However, these were conventional components of an active matrix display. Active matrix displays were well known and obvious for having fast response times and good viewing properties. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to create an active matrix display because of its fast response times and good viewing properties. Use of conventional elements provided the additional benefits of having well understood behavior and well established supply chains and manufacturing methodologies.

Response to Arguments

Applicant's arguments with respect to claims 1 and 9 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

2. Claims 2-5 and 10-15 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: none of the prior art taught or suggested placing the optical plate on the inside of the counter substrate, with the common electrode formed thereon.

Conclusion


Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Chung whose telephone number is (703) 306-0155. The examiner can normally be reached on Monday-Friday from 8:30 am to 5:00 pm.


ROBERT H. KOHN
SUPERVISOR OF PATENT EXAMINERS
TECHNICAL CENTER 1200

David Chung
GAU 2871
09/07/03